

## 4. Environmental Consequences

### 4.1. Elements of the Human Environment

The BLM considered all of the following elements of the human environment when analyzing the impacts of the proposed Idaho Power transmission-line ROW. Some of the listed elements of the human environment are subject to specific requirements specified in statutes, regulations, executive orders, or policy (see Appendix 1). Others are included because they are among the resources and land uses managed by the BLM field offices. Elements checked with an “X” are not affected (or are only minimally affected) by the Proposed Action and would receive no further consideration.

<input checked="" type="checkbox"/> Air Quality	<input type="checkbox"/> Special Status Species (threatened, endangered, sensitive, proposed)
<input type="checkbox"/> Floodplains/Wetlands/Riparian Areas	<input checked="" type="checkbox"/> Wilderness Study Areas
<input checked="" type="checkbox"/> Prime/Unique Farm Lands	<input checked="" type="checkbox"/> Wild and Scenic Rivers
<input checked="" type="checkbox"/> Existing ACECs/Natural Areas	<input checked="" type="checkbox"/> Soil Resources
<input type="checkbox"/> Native American Religious Concerns/Traditional Uses	<input checked="" type="checkbox"/> Water Quality (Drinking or Ground)
<input type="checkbox"/> Tribal Rights/Indian Trust Resources	<input checked="" type="checkbox"/> Off-highway Vehicle Use
<input type="checkbox"/> Cultural Resources	<input checked="" type="checkbox"/> Cave Resources
<input type="checkbox"/> Paleontological Resources	<input checked="" type="checkbox"/> Visual Resources
<input checked="" type="checkbox"/> Environmental Justice	<input checked="" type="checkbox"/> Forest Resources
<input checked="" type="checkbox"/> Wastes (Hazardous or Solid)	<input checked="" type="checkbox"/> Mineral Resources
<input type="checkbox"/> Economic/Social Values Wildlife	<input checked="" type="checkbox"/> Other Special Designations (National Monument, Wilderness, National Recreation Trails)
<input type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Fisheries
<input checked="" type="checkbox"/> Availability of Access/Need to Reserve Access	<input type="checkbox"/> Recreation Use, Existing and Potential
<input checked="" type="checkbox"/> Livestock Grazing/Rangeland Resources Inv	<input type="checkbox"/> Vegetation Types/Communities
<input type="checkbox"/> Invasive/Non-native Species	<input checked="" type="checkbox"/> Agricultural Entry
<input type="checkbox"/> Migratory Birds	<input type="checkbox"/>

### 4.2. Archaeological and Historical Resources

The prehistoric and historic resources within the ROW have been well characterized. Class III cultural surveys were completed for the entire project area. These surveys, and past surveys, have identified several sites that, based on a preliminary evaluation, are eligible or potentially eligible for the NRHP. Although the final eligibility status for the NRHP has not been determined for the identified sites, determinations of impacts are based on standards and regulations set out under the NRHP.

Determinations of "adverse effect" most commonly are associated with undertakings that impact cultural properties determined eligible for National Register listing for values other than information potential, or in cases where disturbance of human remains is anticipated. "No adverse effect" determinations ordinarily are made when properties (usually archaeological sites) valued solely for their information potential would be impacted, but where data recovery would precede the disturbance. A determination of "no effect" is made when (1) the undertaking can be redesigned to entirely avoid effects to eligible properties, or (2) when only elements of eligible properties that do not contribute to their importance would be affected.

The determination of significance and effect, as certified by the BLM and reviewed by the Idaho SHPO, is included in Appendices 2 and 3, respectively.

#### **4.2.1. Proposed Action**

Several historic or prehistoric archaeological sites have been identified in the project area. O&M activities that cause ground disturbance may impact these sites. Such impacts would be considered significant if they adversely affect a historic or prehistoric archaeological site that is potentially eligible to the NRHP, or a property of historic or cultural value to a community or ethnic or social group. Consequently, implementation of the Proposed Action, in the absence of protection measures, could result in adverse impacts to these resources.

The Proposed Action, being an administrative action, will not affect the condition of these sites. It will trigger the additional evaluation of future activities that potentially could disturb a site. Formal nomination to the NRHP would be pursued for sites determined to be eligible based on future evaluation. The evaluation process will include consultation with the BLM, SHPO, and affected Indian Tribes.

Applicant proposed protection measures include marking and avoiding cultural sites prior to ground disturbing activities (Protection Measure 1-1). If a ground disturbing activity is unavoidable and may impact sites, the eligibility status of the sites considered potentially eligible would be determined through data recovery and additional analysis (Protection Measure 1-4) prior to any O&M activity occurring that may result in surface disturbance. In addition, an appropriate mitigation plan on sites determined to be eligible would be completed to assess a no effect, no adverse effect, or adverse effect determination prior to any surface disturbing activity occurring. Therefore, no impacts to cultural sites are anticipated if the Proposed Action with protection measures is implemented.

No Traditional Cultural Properties were identified during the cultural resources investigations or BLM Tribal consultations. Therefore, no adverse effects on Traditional Cultural Properties are anticipated.

#### **4.2.2. No-Action Alternative**

Although under the No-Action Alternative cultural sites would be protected from authorized uses under federal law (e.g., NHPA), it does not provide as comprehensive and direct a level of protection as the Proposed Action with protective measures. This is particularly applicable to

potentially eligible sites, since these sites may or may not be eligible for the NRHP, and thus afforded increased protection of an affect determination and an associated mitigation plan. Thus, the No-Action Alternative would likely have a low impact on historic and archaeological sites as a whole, with moderate impacts to sites potentially eligible for the NRHP.

### **4.3. Threatened, Endangered, and Sensitive Plant Species**

This section presents an analysis of the potential environmental impacts to plant species on federal lands that may result from implementation of the Proposed Action and No-Action alternatives. It also presents protective measures (also detailed in section 2.2.3.2) that, when followed, would eliminate or greatly reduce the impacts of the project.

The impact analysis of the two federally listed or candidate species is presented first, followed by the three BLM sensitive species that occur in the project area. The species presented in 3.0 but not discussed here have little to no potential to be impacted because they do not occur in the ROW.

#### **4.3.1. Listed and Candidate Species**

Project impacts to federally listed or candidate plant species can be placed in three categories. High (direct) impacts would result from the take of individual plants or populations, or a reduction in health or condition of occupied habitats. Moderate (indirect) impacts would result from a reduction in health or condition of suitable but unoccupied habitat. Low (indirect) impacts would result from reduction in health or condition of unoccupied habitat not currently suitable to support the species.

##### **4.3.1.1. Utes ladies'-tresses**

###### **Proposed Action**

###### ***Project Impacts***

Idaho Power field surveys did not locate any populations of *Spiranthes diluvialis* (Ute ladies'-tresses) within the project area. In addition, the potential for *S. diluvialis* to be present in suitable habitat within the project area is low. Therefore, no impacts to this species are anticipated to occur from implementing the Proposed Action.

###### ***Determination of Effect***

The Proposed Action would have “no effect” on *Spiranthes diluvialis*.

###### **No-Action Alternative**

Under the No-Action Alternative, no direct or indirect impacts to *Spiranthes diluvialis* are expected to occur as a result of the project. The No-Action Alternative would have “no effect” on *Spiranthes diluvialis*.

#### 4.3.1.2. Slickspot Peppergrass

##### Proposed Action

###### *Project Impacts*

Idaho Power field surveys did not locate any populations of *Lepidium papilliferum* (slickspot peppergrass) in the project area. However, numerous slickspots, which represent habitat of undetermined occupancy, were encountered. The undetermined occupancy status stems from the inconsistent germination ecology of slickspot peppergrass. A single survey may not detect the presence of this species. An assessment of the suitability of these slickspots to support *L. papilliferum* was not conducted in conjunction with the surveys. Therefore, without mitigation the Proposed Action may cause moderate impacts to *L. papilliferum*.

###### *Mitigation Measures*

To reduce the potential impact of O&M activities to *L. papilliferum* or its habitat, Idaho Power has proposed the following protection measures in addition to general protection measures described in section 2.2.3.2.:

- Prior to ground disturbing or fuel treatment O&M activities, surveys for *L. papilliferum* and slickspots would be conducted in the work area. Identified habitat or populations would be marked as an exclusion area.
- If impacts to *L. papilliferum* or slickspots were unavoidable, Idaho Power would consult with the BLM and USFWS before commencing activities.
- When emergency O&M activities occur within the potential range of *L. papilliferum*, Idaho Power would assess whether impacts to *L. papilliferum* or slickspot habitat occurred. If so, Idaho Power would consult with the BLM and USFWS on a mitigation plan.
- No herbicide treatments would be applied in or near slickspot habitat without prior approval by the BLM and USFWS.

###### *Determination of Effect*

The Proposed Action with mitigation “may affect, but is not likely to adversely affect” *L. papilliferum*.

##### No-Action Alternative

The No-Action Alternative, without protective measures, would result in a “may affect, likely to adversely affect” *L. papilliferum* because of the increased potential for O&M activities to inadvertently impact suitable habitat or future populations that may be present in the project area.

#### 4.3.2. Sensitive Species

Possible effects of the project transmission lines on special status plants may be described in two categories: direct effects and indirect effects. Direct effects would primarily result from ground

or vegetation disturbance related to O&M activities. Disturbance within special status plant populations might occur when Idaho Power crews access the lines and conduct maintenance on structures or conductors, particularly if ground disturbance is required. As the existing road network provides relatively good access to most of the lines on federal lands, this type of disturbance would primarily be confined to the existing roadways and the structure bases. However, it is occasionally necessary to travel cross-country to reach a structure base or other facility.

Indirect effects of the project lines on special status plant species are those impacts that are removed in either time or space from the O&M activity that caused the effect. The primary potential indirect effects on special status plant species are noxious weed impacts, fire impacts, and access-related impacts. Noxious weed impacts can occur if O&M activities contribute to the introduction and/or spread of non-native, invasive plant species. Ground disturbing activities can remove native vegetation, creating a fertile ground for the establishment of noxious weeds, and maintenance vehicles can unintentionally bring in and deposit new noxious weed propagules to an area. Fire effects can result if O&M of the project lines changes fire frequency and intensity patterns in the project area. This can occur, for example, if a maintenance vehicle starts a range fire, or if Idaho Power access roads act as firebreaks, decreasing the size of wildfires.

For both direct and indirect effects, it is difficult to determine what proportion is produced by project operations, and what proportion is produced by non-Idaho Power activities. Some of the disturbances are specific to Idaho Power's operations, such as ground disturbance around structure bases. Other disturbances are clearly out of Idaho Power's jurisdiction, such as cattle grazing and recreation. Many other disturbances, however, are the result of several users (including Idaho Power) utilizing the same area or facility. For example, most of the roads in the project area are multiple-use, providing access for ranchers, BLM personnel, residents, and recreationists, as well as Idaho Power crews.

All of these Idaho Power and non-Idaho Power activities may potentially impact the special status plant populations within the project area. However, because little is known about how any of these species respond to particular disturbances, it is difficult to determine which factors are influencing which populations, and to what extent. Recorded disturbances at a particular occurrence may be negatively or positively influencing a population's viability. However, based on general vegetative responses to disturbance, and observational evidence for the specific species, it is possible to derive some general conclusions regarding special status plant impacts within the project area.

### ***Applicant Committed Environmental Protection Measures***

Six measures to protect plant resources are described in the Proposed Action (section 2.2.3.2.) These include measures to avoid impacts near sensitive plant populations (Protective Measures 2-1, 2-2). In addition, general habitat protection measures (Protective Measures 2-3 through 2-7) are intended to protect habitat, and thus sensitive species, by reducing the threat of noxious weed invasion and rehabilitating sites disturbed by O&M activities. These measures are expected to protect both of the following sensitive plant species from significant impacts from transmission-line related O&M activities.

#### 4.3.2.1. Mourning milkvetch

##### *Proposed Action*

Direct project-related effects to *Astragalus atratus* var. *inseptus* (mourning milkvetch) are likely limited to a small proportion of the overall local population. Many of the populations are extensive and extend far beyond the edge of the ROW. Even within the ROW, many of the plants are located well away from the structure bases and access roads, in areas that appeared to receive little or no direct project-related disturbance. It is likely that direct project impacts have not significantly limited the viability of the species within the project area. Proposed protective measures would further protect these populations, thus impacts from project related activities would be unlikely.

Indirect effects are more difficult to determine. Cattle grazing within the project area has produced widespread effects, which, observational evidence suggests, may detrimentally impact *Astragalus atratus* var. *inseptus* populations. In addition, it is safe to assume that, like most native species, increased noxious weed densities would have a negative effect on the populations.

##### *No-Action Alternative*

Given the location of existing *Astragalus atratus* var. *inseptus* populations in relation to the ROW, impacts from the No-Action Alternative would be unlikely, even without additional protection measures.

#### 4.3.2.2. Shockley's matted buckwheat

Moseley and Reveal (1995) conclude that direct habitat disturbance is likely the greatest threat to the long term viability of *Eriogonum shockleyi* var. *shockleyi* (Shockley's matted buckwheat). They note that the taxon's habitat is resistant to impacts from factors such as noxious weed invasion, fire, and cattle grazing, although these disturbances may play a role in certain populations.

##### *Proposed Action*

The single *E. s.* var. *shockleyi* occurrence in the project ROW is located near an access road, which runs along the rim of the Snake River Canyon. At one point (outside of the ROW) individual plants are located in the middle of the access road. Other developments in the area (communication antenna cluster and agricultural fields) also attract users to this road. Given the multiple uses of this road, the *E. s.* var. *shockleyi* population has the potential to be directly impacted. Upgrades to the road, off-road driving, and erosion related to the road are all examples of potential adverse impacts to this population. However, Idaho Power activities in the area are primarily limited to ingress and egress along this road. The *Eriogonum* plants are not located around tower bases or other areas where maintenance activities would be likely to disturb individuals. The Proposed Action with protection measures would have a low potential to impact *E. s.* var. *shockleyi*.

Lesser impacts are possible to this population from factors such as noxious weed invasion, changes in fire frequency patterns, and cattle grazing. However, as noted previously, these would be expected to be less harmful to the population than direct habitat impacts.

#### ***No-Action Alternative***

Given the location of *E. s. var. shockleyi* in the access road, O&M activities would have a low potential to impact this population. Thus, the level of impact would be expected to be similar to that in the Proposed Action. The existing condition of the road is such that maintenance requirements are expected to be low to non-existent.

### **4.4. Threatened, Endangered, and Special Status Wildlife Species**

This section presents an analysis of the potential environmental impacts to wildlife on federal lands that may result from implementation of the Proposed Action and No-Action alternatives. It also presents protective measures (also detailed in section 2.2.3.2) that would eliminate or greatly reduce the impacts of the project.

Eleven of the species listed in Table 3-3 have some potential to be impacted by O&M activities. These will be discussed in the following order: federally listed, candidate, then remaining species of special concern, based on impact type. The species not discussed have very little to no potential to be impacted, mostly due to their extreme unlikelihood to be present in the line ROW. For those that may be present, but have no potential to be impacted, it is assumed they would not be significantly affected by O&M activities (e.g. snails, bats, small birds). For most species the brief air and ground patrols would not cause a disturbance. Line maintenance occurs infrequently, is typically conducted for only a few spans, and for a few days. The general protective measures listed in section 2.2.3.2 should protect the habitats of the species (e.g. minimal ground disturbance, protection of water quality, fire prevention, and control of weeds).

#### **4.4.1. Listed and Candidate species**

##### **4.4.1.1. Bald eagle**

The resources that are essential to bald eagles, and thus must be managed for, include nest sites, communal night roosts, and perch sites adjacent to foraging areas (Anthony et al. 1995). The Pacific bald eagle recovery plan provides guidelines for establishing buffer zones around these important areas and restricting activities during critical periods of eagle use (USFWS 1986). In general, transmission lines and associated O&M activities that are greater than 0.5 mi from nests, roosts, or frequently used foraging perches should not impact the species.

Impacts to bald eagles from the Boise-to-Borah project can be placed in three categories. High (direct) impacts would result from the take of individual eagles, the prevention of successful reproduction, or a reduction in critical habitat (primarily trees). Moderate (indirect) impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from minor and short-term loss or reduction of bald eagle habitat or temporary displacement of bald eagles from use areas.

## **Proposed Action**

### ***Project Impacts***

Currently, there are no bald eagle nests near the project area. However, bald eagles could be temporarily displaced from day perches or roosts near lines while Idaho Power personnel are present. The lines, by themselves, should not pose a risk as bald eagles have excellent vision and collisions with transmission lines are very rare. Electrocution is not a risk with the bald eagle for lines greater than 69 kV due to conductor and groundwire spacing. Boise-to-Borah lines are 230 and 345 kV.

Bald eagles roosting and perching in the Barber Pool area of the Boise River use areas from 0.25 to 1 mi (400 to 1600 m) from the lines. There is no tall vegetation, suitable for perching by eagles, in the ROW. There could be a low impact from temporary displacement due to O&M activities, but these activities should not significantly disturb the birds.

Bald eagles foraging in the Lake Walcott area, near the Midpoint to Borah #2 line, and in the mid-Snake River area near the Boise Bench to Midpoint #1 line should not be significantly disturbed by O&M activities. Line maintenance and pole replacement for these lines typically occur from April to October when eagles are not present. Even if present, the displacement would be temporary and only for a small area. No roosts or perch areas are known near these lines.

### ***Mitigation Measures***

The bald eagle recovery plan recommends that construction, habitat improvement, and other potentially disturbing activities should not be allowed up to 0.25 mi from nests or roosts and that activities should be regulated within 0.5 mi where eagles have line-of-sight vision (USFWS 1986). The plan also states that key wintering areas need protection from about 15 November to 15 March. Therefore, in order to reduce the potential for a temporary disturbance due to O&M activities Idaho Power would not allow major O&M activities between November 15 and March 15 within 0.25 mi (400 m) of wintering bald eagle perch trees or roost locations within the project area (Protective Measure 3-3). Major O&M actions include annual scheduled maintenance, detailed structure inspections and replacement, and vegetation clearing. Emergency maintenance would not be restricted, however utmost precautions should be taken to prevent impacts. In addition, Idaho Power would consult with agencies prior to scheduled O&M activities in bald eagle areas to confirm current roost or perch locations.

The bald eagle recovery plan recommends that low level aircraft operations should not be allowed within 0.25 mi of roosts and that flights should be regulated up to 0.5 mi where eagles have line-of-sight vision (USFWS 1986). Kaltenecker et al. (1994) recommended that all helicopter and fixed-wing overflights of Barber Pool below 1,000 ft should be prohibited from 15 November to 15 March. However, aerial inspection of the lines occur only every ten years and, at present, stay 0.25 mi or greater from the eagle use areas. These lines do not have an annual aerial patrol. If they are scheduled in the future, they should follow the 0.25 mi recommendation.

In order to prevent significant impacts, any bald eagle nest that becomes established near the project area would be protected by spatial and temporal restrictions. Idaho Power would consult with the BLM and USFWS as to the appropriate restrictions on O&M activities.

### ***Determination of Effect***

When protective measures are applied, the Proposed Action “may affect, but is not likely to adversely affect” bald eagles or their preferred habitat. Long and short-term effects (if any) of the project on bald eagles may be limited to the temporary displacement of a few, if any, individuals.

### **No-Action Alternative**

The Proposed Action and No-Action alternative would have the same effects. Mitigation measures for both actions need to be the same as federal law protects the species. Therefore the determination of effect is the same for the proposed and no-action alternatives.

#### **4.3.1.2. Gray wolf**

High (direct) impacts would occur to the gray wolf if direct take occurred, if there was a prevention of successful reproduction, or if there was a reduction in critical habitat (such as denning sites). Moderate impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from temporary displacement of individuals during O&M activities.

### **Proposed Action**

#### ***Project Impacts***

The closest known wolf pack to the project area is about 34 mi to the north of the project lines. Single or small pairings of wolves might range into the project area on an extremely rare basis. The open plain habitat is not suitable for establishment of a pack’s core area. No direct or indirect impacts to the gray wolf are expected to occur as a result of this project.

#### ***Mitigation Measures***

No mitigation measures are required.

#### ***Determination of Effect***

There should be “no effect” of the project on the gray wolf.

### **No-Action Alternative**

Under the No-Action Alternative no direct or indirect impacts to gray wolf are expected to occur as a result of the project. There should be “no effect” of the project on the gray wolf.

#### **4.4.1.3. Aquatic snails**

High (direct) impacts would occur to aquatic snails if direct take occurred or if there was a significant reduction in habitat quality (cold, well-oxygenated, unpolluted water). Moderate to low impacts would result from a short-term reduction of quality habitat.

**Proposed Action*****Project Impacts***

The Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail may be present in the Snake River, or associated springs, in the area of the four Boise Bench to Midpoint #1 line crossings. Height of wires over the river range from 50 to 115 ft. Distances from towers to cliff edges or river banks range from about 60 to 400 ft. O&M activities do not involve aquatic activities, and as such, no direct or indirect impacts to aquatic snails are expected to occur as a result of this project.

***Mitigation Measures***

No mitigation measures are required.

***Determination of Effect***

There should be “no effect” of the project on the Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail.

**No-Action Alternative**

Under the No-Action Alternative no direct or indirect impacts to aquatic snails are expected to occur as a result of the project. There should be “no effect” of the project on the Idaho springsnail, Utah valvata snail, Snake River physa snail, Banbury Springs limpet, and Bliss Rapids snail.

**4.4.1.4. Yellow-billed cuckoo**

Impacts to yellow-billed cuckoos from the project can be placed in three categories. High (direct) impacts would result from the take of individual cuckoos, the prevention of successful reproduction, or a reduction in critical habitat. Moderate (indirect) impacts would result from a short-term reduction of critical habitat. Low (indirect) impacts would result from minor and short-term loss or reduction of yellow-billed cuckoo habitat or temporary displacement of cuckoos from use areas.

**Proposed Action*****Project Impacts***

Breeding populations of yellow-billed cuckoos in Idaho are believed to be extirpated (CBD 2003). As the species occupies forested riparian areas with thick understory, and there are no significant amounts of riparian habitat on public land along the lines, the species would not be expected to occur in the project area. Therefore, no direct or indirect impacts to yellow-billed cuckoos are expected to occur as a result of this project.

***Mitigation Measures***

No mitigation measures are required.

***Determination of Effect***

There should be “no effect” of the project on the yellow-billed cuckoo.

## **No-Action Alternative**

Under the No-Action Alternative no direct or indirect impacts to cuckoos are expected to occur as a result of the project. There should be “no effect” of the project on the yellow-billed cuckoo.

### **4.4.2. Other sensitive species**

Nine sensitive bird species and the pygmy rabbit have the potential to be directly or indirectly impacted by O&M activities. Five of the bird species and the rabbit could be directly impacted through disturbance to the nests or the individuals, and indirectly through disturbance to their habitats. The main concern for the remaining four bird species is line collision. In most cases actual nesting or other critical areas are unknown within the project area. However, if occurrences in the ROW are discovered, species specific timing of O&M activities and spatial buffers as outlined below should eliminate any serious project impacts to the species.

#### ***Applicant Committed Environmental Protection Measures***

Measure 3-1 states that if sensitive species were found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the species or population and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone. Measure 3-2 states that O&M activities in designated areas would be modified or curtailed during sensitive periods (e.g., nesting and breeding periods) for known locations of candidate, proposed, threatened, and endangered, or other sensitive animal species. The Authorized Officer listed in the POD would approve sensitive areas and timeframes. Exceptions to both of these rules would be emergency repair situations.

#### **4.4.2.1. Long-billed curlew**

Long-billed curlews are known to nest within the general vicinity of the project area. However, there are no BLM designated long-billed curlew nesting areas near the lines. The BLM Jarbidge Resource Management Plan guidelines recommend that major construction and O&M work be scheduled prior to 15 March or after 30 June, within designated long-billed curlew nesting areas, to avoid or minimize disturbance (USDI 1987). In southwestern Idaho territory sizes average about 35 acres in the most densely populated areas and, typically, an unoccupied buffer zone of 984-1,640 ft (300-500 m) exists around the edge of suitable habitat (Dechant et al. 2001).

#### ***Proposed Action***

If long-billed curlew nests were discovered within 0.25 mi (400 m) of the lines, limiting O&M activities to patrols from mid-March to late June would significantly reduce the potential for disturbance.

#### ***No-Action Alternative***

Under the No-Action alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent disturbances to long-billed curlews.

#### **4.4.2.2. Sage grouse**

O&M activities on the Borah-to-Boise transmission lines could cause direct impacts to sage grouse through lek disturbance, nest disturbance, and habitat degradation. Indirect impacts could occur due to temporary reduction in sage habitat due to O&M activities, prior to rehabilitation. These factors will be discussed in light of specific knowledge of the lines, service roads, and O&M activities.

##### **Lek and nest disturbance**

Very little information is presented in the literature on how and at what distance human presence disturbs nesting or lekking grouse. Leks are considered focal points for managing sage grouse (Connelly et al. 2000). Sage grouse nests are, on average, 1.1 to 3.8 mi from a lek (Connelly et al. 2000). Daily disturbance on sage grouse leks could cause reduction in mating, and thereby some reduction in total population. If flushed, sage grouse usually do not return to the lek in the same day (Call and Maser 1985). Spring O&M activities may include line patrols, inspection, and maintenance (Section 2.2.2.2). Most of these activities require personnel to be at a structure or span of structures for less than one day. In the case of major activities (such as pole replacements), personnel may be present for a few days. Connelly et al. (2000) recommended that disturbance be eliminated or at least restricted within 1,640 ft (500 m) of active leks. In addition, the Idaho sage grouse management plan recommends that human disturbances be avoided within 0.62 mi (1 km) of a lek during the breeding season (March 1 through May 31) from 1 hour before sunrise to 3 hours after sunrise and that new transmission lines should not be developed within 1,200 ft of a lek (Idaho Department of Fish and Game 1997).

The five historical sage grouse leks within 0.62 mi (1 km) of the Borah-to-Boise lines appear to be no longer in use. In addition none were closer than 0.34 mi (550 m) so there is likely little to no risk of disturbance to leks by O&M activities.

##### ***Proposed Action***

If sage grouse leks are found near project ROW, no major O&M activities shall occur between March 1 and June 1 within 0.62 mi (1 km) of active sage grouse leks (Protective Measure 3-4). Idaho Power would coordinate with the IDFG on an annual basis to obtain the most recent lek data. Major O&M would include climbing inspections, line maintenance, pole replacement, and vegetation clearing. Fall reseeding is preferred near leks. If spring reseeding is necessary, activity should not occur before 11:00 am from March 1 to May 1. In addition spring helicopter flights would be done after 11:00 am (Protective Measure 3-4). Grouse are unlikely to be bothered by infrequent use of the service roads typical to O&M activities, such as patrolling, as Call and Maser (1985) state that grouse are tolerant of vehicles and may be watched at close range if observers do not leave the vehicle. However, scheduling spring aerial and ground patrols to start after 11 am would reduce the risk of lek disturbance.

If nests were found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the nest and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone (Protective Measure 3-1).

***No-Action Alternative***

Under the No-Action alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent direct disturbances to sage grouse.

**Habitat degradation**

A few site-specific locations along the Borah-to-Boise transmission lines may require individual trees to be trimmed to ensure system reliability and safety. Sagebrush is not affected. Other than vegetation maintenance in the ROW, O&M activities that could cause localized ground disturbance, including removal of habitat, would be restricted to service road shoulders and work areas at structures. Although ground disturbance can cause habitat degradation, impacts from individual O&M activities are probably insignificant compared to landscape level processes (e.g., wildfire, livestock grazing, and habitat conversion) that typically damage grouse habitats (Sather-Blair et al. 2000). Nonetheless, O&M policies should avoid further habitat damage, especially where active leks are present.

***Proposed Action***

Under the proposed action the area around all poles would be cleared to a distance of 10 ft. This may require the removal of a very small amount of sage grouse habitat. We recommend that O&M activities that directly degrade sagebrush communities in sage grouse habitats be reseeded with species compatible with grouse habitat needs (especially native forbs). For major O&M activities requiring ground disturbance, Idaho Power would prepare a revegetation plan in consultation with the BLM. The plan would specify appropriate revegetation techniques to be applied. Techniques could include reseeded native or other acceptable vegetation species (Protective Measure 2-6).

***No-Action Alternative***

Under the No-Action alternative poles would not be cleared to a distance of 10 ft. In addition, the FERC licenses directed Idaho Power to rehabilitate disturbed land. Therefore indirect disturbance to sage grouse through habitat degradation is expected to be minimal under the no-action alternative.

**4.4.2.3. Raptors**

The ferruginous hawk, prairie falcon, and the burrowing owl are the only raptor species of special concern known to nest near the Boise-to-Borah transmission lines. The USFWS has a clearly stated policy on disturbing nesting raptors: the Migratory Bird Treaty Act protects birds of prey. The Bald Eagle Protection Act protects golden eagles as well as bald eagles.

Nesting, roosting, and perching raptors can cause power outages if their feces or nesting materials interfere with conductors, insulators, or air gaps. Idaho Power manages nesting on transmission line structures to reduce conflicts. Such management may include relocating nests, modifying structures, and providing nesting platforms. Idaho Power consults with the USFWS and Idaho Department of Fish and Game when a problem nest is located.

In past years, Idaho Power has periodically inventoried raptor nests occurring on the Boise-to-Borah transmission-line structures. Beginning in 2003, raptor nests on project area lines will be recorded annually. In addition, Idaho Power will incorporate additional sources of nest location data in the vicinity of the transmission line rights-of-way as it becomes available.

### **Ferruginous hawk**

Ferruginous hawks are known to nest on project area lines. England et al. (1997) recommended a 100 m (328 ft) buffer for major activities near occupied ferruginous hawk nests. White and Thurow (1985) recommended no activities within 250 m (820 ft) of an occupied nest and Richardson and Miller (1997) recommended no major actions within 800 m (0.5 mi) of an occupied nest. BLM guidelines (USDI 1987) restrict major activities within 0.75 mi of a nest from 15 March to 30 June. Currently line maintenance and pole replacement occurs between April and October for the Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines, anytime of year for the Boise Bench to Midpoint #2 and #3 lines, and May to August for the Midpoint to Borah #2 line.

### ***Proposed Action***

Spatial and temporal management zones or buffers for nests and roosting sites can protect raptors from being disturbed by O&M activities. Any restrictions on an O&M activity should consider the location, type, and duration of the activity. Table 4-1 includes suggested periods during which O&M activities should be reviewed and may be restricted, depending on their potential to disturb nesting and roosting raptors. In general, Idaho Power's Environmental Affairs Department would review all O&M activities that would be within 400 meters of a raptor nest before the work can begin. For ferruginous hawk nests, buffer zones should be set and all O&M actions, except patrols, should be avoided between March 15 and June 30.

**Table 4-1. Temporal periods of nesting raptor species during which non-patrol operation and maintenance activities would be reviewed, and may be restricted, within 400 meters of the Borah-to-Boise transmission lines.**

<b>Raptor Species</b>	<b>Life Stage</b>	<b>Restrictive Time Period</b>
Bald eagle	Nesting	March 1– July 31
Bald eagle	Winter roost	November 1– March 15
Golden eagle <sup>1</sup>	Nesting	March 1– June 30
Osprey <sup>1</sup>	Nesting	April 1– July 31
Prairie falcon	Nesting	March 15 – June 30
Ferruginous hawk	Nesting	March 15 – June 30
Swainson's hawk <sup>1</sup>	Nesting	April 15 – July 30
Red-tailed hawk <sup>1</sup>	Nesting	March 1– June 30
Burrowing owl	Nesting	March 15 – June 30

<sup>1</sup> These are not species of special concern for this project but they are likely to be present in the project area and are protected by the Migratory Bird Treaty Act and the Bald Eagle Protection Act.

***No-Action Alternative***

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. Idaho Power would consult with the BLM whose guidelines (USDI 1987) restrict major activities within 0.75 mi of a ferruginous hawk nest from 15 March to 30 June.

**Prairie falcon**

The prairie falcon is a cliff nester and should not be significantly disturbed by maintenance activities on towers above the cliffs. Holthuijzen et al. (1990) found that nesting prairie falcons showed no adverse effects during the re-construction of Swan Falls Hydroelectric project, which involved blasting. Holthuijzen (1995c) documented 3 prairie falcons nests in the mid-Snake River region (which included 3 of the 4 Boise Bench to Midpoint #1 line crossings). All of the nests were more than 0.5 mi from the line crossings. The prairie falcon nesting period in southern Idaho typically runs from March 15 to June 30. The Boise Bench to Midpoint #1 line maintenance typically occurs between May and October.

***Proposed Action***

In the event that an occupied prairie falcon eyrie occurred near the BLM line crossing, Idaho Power would consult with the BLM as to temporal and spatial restrictions needed.

***No-Action Alternative***

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. Idaho Power would consult with the BLM as to temporal and spatial restrictions needed on a site specific basis.

**Burrowing owl**

Burrowing owls are known to nest near project area lines. They are mostly crepuscular and nocturnal and would not likely be significantly disturbed by minor or temporary major O&M activities as long as their burrows were not directly impacted. BLM guidelines (USDI 1987) restrict major activities within 0.25 mi (400 m) of a nest from 15 March to 30 June. Currently line maintenance and pole replacement occurs between April and October for the Boise Bench to Midpoint #1 and Midpoint to Borah #1 lines, anytime of year for the Boise Bench to Midpoint #2 and #3 lines, and May to August for the Midpoint to Borah #2 line.

***Proposed Action***

If a nest becomes known near the ROW, initially Idaho Power would restrict major activities within 0.25 mi (400 m) of it from 15 March to 30 June (Protective Measure 3-2). BLM would be consulted as to the exact avoidance restrictions.

***No-Action Alternative***

Under the No-Action alternative O&M activities would still be restricted spatially and temporally due to federal protections. If a nest becomes known near the ROW, initially Idaho

Power would restrict major activities within 0.25 mi (400 m) of it from 15 March to 30 June (Protective Measure 3-2). BLM would be consulted as to the exact avoidance restrictions.

#### **4.4.2.4. Colonial waterbirds**

Four colonial waterbird species may be at medium to high risk of transmission-line collision (SAIC 2000): American white pelican, white-faced ibis, black tern, and trumpeter swan (Table 3-3). Risk was based on mortalities reported in the literature and on risky flight characteristics such as awkward, distracted, frequent, nocturnal, or fast flight and large tight flocks formed on a daily basis or in migration. Avian mortality from collisions with power lines is well documented (Scott et al. 1972, McKenna 1976, Anderson 1978, Avery 1978, Malcolm 1982, Faanes 1987, and Bevanger 1994). Collisions occur most often where transmission lines intercept areas where birds concentrate, such as migratory flyways, feeding areas, and nesting/roosting sites (Savereno et al. 1996). Although some avian collisions with power lines occur during migration, most collisions take place during flights within a daily use area (APLIC 1994). Overhead groundwires that are situated above the conductor wires are the major cause of bird collisions with power lines (APLIC 1994). These groundwires are of a smaller diameter than the conductor wires and are less visible to birds.

On BLM land, one Snake River crossing of the Boise Bench to Midpoint #1 line (tower 995 to 996) may pose a collision risk. However, this span appears to have a low potential to cause collisions. At this river crossing, the line is high over the river (about 115 ft) across a steep cliff area. The flight paths of the species of concern in this area would likely be below the lines. American white pelicans, white-faced ibis, black terns, and trumpeter swans do not nest in the immediate area but use the area for foraging and movement. No collisions have been reported to Idaho Power despite a variety of wildlife studies in the area from 1990 to 1992 (Idaho Power 1995). The majority of waterbirds use portions of the Snake River upstream of the Boise Bench to Midpoint #1 line crossings. Based on this information, the line crossing would not be considered a major fly-way and the risk of collision causing significant, population level declines is extremely unlikely.

#### ***Proposed Action***

The current risk level does not warrant a monitoring program. However, in the event of reported collisions there would be follow-up evaluations (Protective Measure 3-5). Measures to minimize avian collision would follow best management practices recommended in *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994* (APLIC 1994) or subsequent updates to that publication.

#### ***No-Action Alternative***

Under the No-Action alternative no effort is required to prevent avian collisions. Due to the extremely low risk of collision occurring on BLM lands, the impact of the no-action alternative is likely the same as the proposed action.

#### **4.4.2.5. Pygmy rabbit**

The pygmy rabbit is a rare inhabitant of big sagebrush shrublands. There are no recent records of the species in the project area but it may be present near the Midpoint to Borah #1 and #2 lines if appropriate habitat exists. Roads and cleared areas seem to be barriers to dispersal (Heady et al. 2001, Csuti et al. 1997) but the minor infringement of the Idaho Power ROW, including service roads, on the natural habitat should not affect this species. Rehabilitation of sagebrush areas disturbed by Idaho Power activities would minimize any impacts to the species. If burrow locations are found near the lines there may be a need for timing or spatial restrictions during the spring to summer breeding season.

##### ***Proposed Action***

Under the proposed action the area around all poles would be cleared to a distance of 10 ft. This may require the removal of a very small amount of pygmy rabbit habitat. We recommend that O&M activities that directly degrade sagebrush communities in known pygmy rabbit areas be reseeded with species compatible with pygmy rabbit habitat needs. For major O&M activities requiring ground disturbance, Idaho Power would prepare a revegetation plan in consultation with the BLM. The plan would specify appropriate revegetation techniques to be applied. Techniques could include reseeded native or other acceptable vegetation species (Protective Measure 2-6).

If pygmy rabbit burrows are found before or during O&M activities, Idaho Power would establish a 100-foot buffer zone around the burrows and then contact the BLM immediately. Until the BLM authorized Idaho Power to proceed all activities would cease within the zone (Protective Measure 3-1).

##### ***No-Action Alternative***

Under the No-Action alternative poles would not be cleared to a distance of 10 ft. In addition, the original ROW grant did direct Idaho Power to rehabilitate disturbed land. Therefore indirect disturbance to pygmy rabbits through habitat degradation is expected to be minimal under the no-action alternative. However, under this alternative O&M activities would not be restricted spatially or temporally and there would be no effort to prevent direct disturbances to pygmy rabbits.

## 5. LIST OF PREPARERS

### **Bureau of Land Management**

Authorized Officer/Deciding Official: Joe Kraayenbrink, Acting District Manager, Upper Snake River District, Idaho Falls

Project Manager: Scott Powers, Project Manager, Washington Office (based in the Montana State Office, Billings)

Real Estate: Dorothy Bonner, Reality Specialist, Burley Field Office

Cultural Resources: John Lytle, Archaeologist, Burley Field Office

Biological Resources: Gary Wright, Wildlife Biologist, Shoshone Field Office

### **Bureau of Reclamation**

Authorized Officer/Deciding Official: Jerrold D. Greg, Area Manager, Snake River Area Office, Boise

### **Idaho Power Company**

Project Manager/Biological Resources: Brett Dumas, Landscape Ecologist

Project Sponsors: Darel Tracy, Project Leader, and Allan Ansell, Environmental Supervisor

Cultural Resources: Mark Druss, Archaeologist, and Robyn Johnson, Cultural Technician

Wildlife Resources: Leslie Carpenter, Environmental Technician

Botanical Resources: Marie Kerr, Botanical Technician

Rights-of-Way: Mike Jacobs, ROW Agent, and Diana Pon, ROW Permit Coordinator

## **6. LIST OF AGENCIES AND PERSONS CONSULTED**

### **Bureau of Reclamation**

Jerrold Gregg, Area Manager, Snake River Area Office

Yvonne Daniel, Realty Specialist

John Caywood, Realty Specialist

### **Corps of Engineers**

Jana Brinlee, Realty Specialist, Walla Walla District

Peter Poolman, Chief Environmental Compliance Section, Walla Walla District

### **US Fish and Wildlife Service**

Sandi Arena, Fish and Wildlife Biologist, Eastern Idaho Field Office

Barbara Heslin, Botanist, Snake River Basin Field Office

### **Shoshone-Bannock Tribe**

Yvette Tuell, Environmental Programs

Adrian Seaman, Tribal Council Member

### **Shoshone-Paiute Tribe**

Terry Gibson, Tribal Chairman